Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
The 4.9 GHz Band Transferred from Federal Government Use	)	WT Docket No. 00-32
	)	
	)	
	)	
To: The Commission	)	

COMMENTS OF THE
NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL

The National Public Safety Telecommunications Council (NPSTC) hereby respectfully submits the following comments in response to the Commission's Second Report and Order and Further Notice of Proposed Rulemaking (Second R&O & FNPRM), FCC 02-47 (released February 27, 2002), in the above-captioned proceeding. NPSTC commends the Commission on their allocation of the 4.940 – 4.990 GHz band (4.9 GHz band) for dedicated broadband wireless use by local and state public safety agencies. It will allow the public safety community to implement 21st Century wireless broadband technologies to meet critical needs for the protection of life and property in the United States.

The National Public Safety Telecommunications Council is a federation of associations representing Public Safety telecommunications. NPSTC currently consists of the following charter organizations:

American Association of State Highway Transportation Officials (AASHTO)
Association of Public-Safety Communications Officials -International (APCO)
Forestry Conservation Communications Association (FCCA)
International Association of Chiefs of Police (IACP)
International Association of Emergency Managers (IAEM)
International Association of Fire Chiefs (IAFC)

International Association of Fish and Wildlife Agencies (IAFWA)
International Municipal Signal Association (IMSA)
National Association of State Emergency Medical Services Directors (NASEMSD)
National Association of State Foresters (NASF)
National Association of State Telecommunications Directors (NASTD)

NPSTC was created to encourage and facilitate implementation of the findings and recommendations of the Public Safety Wireless Advisory Committee (PSWAC), a federally chartered advisory committee jointly established to advise the Federal Communications Commission and the National Telecommunications and Information Administration on spectrum and technology needs of the local/state/federal public safety community through the year 2010. The NPSTC charter directs that NPSTC shall develop and make recommendations to appropriate governmental bodies regarding Public Safety communications issues; shall serve as a standing forum for the exchange of ideas and information regarding Public Safety communications; shall develop recommendations regarding Public Safety communications policies that promote greater interoperability and cooperation between local, state and federal public safety agencies.

SUMMARY

In this filing, NPSTC will briefly address critical issues of eligibility, potential applications, channel plan, interoperability, regional planning, frequency coordination and licensing.

Eligibility

NPSTC recommends that the sole eligible users of this band be this country's public safety agencies as stated in paragraph 31 of the Second R&O & FNPRM. However, these

agencies should be able to authorize additional use by other key agencies and organizations in response to a major incident or disaster. Such additional users would include, but not be limited to, Federal agencies, utilities, the American Red Cross, and others with whom mission critical communications is required in such an emergency. Such use would be through a Memorandum of Understanding and under the authority of a state or local public safety agency's license and structured in a manner similar to that provided for Federal government users of the 700 MHz band under Section 2.103(b) of the FCC Rules.

Potential Applications

For over two years, NPSTC has participated in a joint European-North American initiative to define future wideband applications and technologies sponsored by the European Telecommunications Standards Institute (ETSI) and the Telecommunications Industry Association (TIA). This effort is known as Project MESA (Mobility for Emergency and Safety Applications). It is structured in the form of a Partnership Project, similar to that used to develop the GSM standard.

Project MESA is in the process of developing a detailed Statement of Requirements for broadband applications. The MESA website http://www.projectmesa.org describes the SOR as follows, "The users of professional wireless telecommunications equipment within the Sector of Public Protection and Disaster Relief (PPDR) have developed the MESA Statement of Requirements (SoR) document. It describes the services and applications, which a future advanced wireless telecommunications system should be able to support in order to realize the most effective operational environment for the Sector. Emphasis has been placed on those applications, which current applied technology cannot carry out to the full, but which have been

identified by the users and their agencies to be key requirements. This document is unique in the sense that it represents the first trans-Atlantic consolidated view expressed directly by the professional users of advanced wireless telecommunication equipment." The most recent draft of the SOR[1] is attached to this filing as Appendix A. This SOR incorporates detailed descriptions of the many potential applications under discussion for this band, including:

- wireless local area networks (WLAN)
- hot spots for mobile office technologies linking mobile or portable platforms to fixed infrastructure
- one and two-way video surveillance
- mobile command systems for deployment at incident scenes

Fixed use will be required in this band to support some of these applications, though we believe that they will usually be of a temporary nature (such as a video surveillance link monitoring a park with high narcotics sales activity). NPSTC does not support use of this band for backhaul or permanent point-to-point applications that can be accommodated in other microwave spectrum already available in bands above 900 MHz, except on a waiver basis.

Channel Plan

A number of potential channel plans have been discussed for the 4.9 GHz band. It is clear that the adoption of standards and technologies in use for nearby existing and emerging wideband applications will provide the greatest benefit for public safety users in terms of cost, time to market and competitive procurement. Thus, NPSTC urges the Commission to provide significant flexibility within its channel plan to allow aggregation as well as splitting of channels to support new technologies. The low power, short-range nature of this band should allow many

[1] Draft DTR/MESA-SA001 V.10 (2002-05-22) is available for public download from the Project MESA website at http://www.projectmesa.org/ftp/SSG_SA/Drafts/SoR(latest_version)/

technologies to be implemented on a non-interference basis, with appropriate planning and coordination.

One of the technologies being closely examined is a WLAN based in the IEEE 802.11(a) standard. This technology requires a 20 MHz channel, making it difficult to build out a network as the 4.9 GHz band supports only two channels. Other standards, such as those used for Multichannel Multipoint Distribution Service (MMDS)[2], provide significant throughput in a 6 MHz channel. NPSTC is aware of proposals being filed that would split the band into ten 5-MHz channels. We examined an additional alternative of seven 1-MHz channels at either end of the band, with the remaining 36 MHz split into six 6-MHz channels. This allows broadband technologies like MMDS to be used for a WLAN across a community, or alternatively supports one or two IEEE 802.11(a) channels by aggregating three 6-MHz and two 1-MHz channels.

Because broadband technologies are still being developed for commercial applications in adjacent spectrum, we encourage the Commission to adopt a channel plan that will give users maximum flexibility in their choice of technologies.

Interoperability

NPSTC commends the Commission on the efforts it made to ensure significant spectrum for interoperability in the 700 MHz band (WT Docket 96-86). Because the public safety experience with broadband is very limited, it is difficult to define specific interoperability

[2] MMDS operates in the 2.5 to 2.7 GHz band, distributing analog NTSC television signals to subscriber stations. Enhanced services in this allocation provide digital wireless two-way broadband connections similar to broadband cable services offered by cable television companies throughout much of the United States. Most of these broadband data services utilize equipment built to the cable modem broadband standard.

requirements, other than to state that interoperability remains a critical concern for both day-to-day operations, as well as for major incidents.

The many and varied implementations of technology within this spectrum will make interoperability especially difficult. We believe that the Commission should task its National Coordination Committee (NCC) established for the 700 MHz band to examine this issue and make recommendations with regard to implementing an interoperability scheme for this band.

Regional Planning

As discussed with regard to the channel plan, and further detailed below with regard to licensing, the many potential uses use of this band will require significant coordination to ensure compatible use of technologies and to resolve border and overlapping jurisdictional coverage issues. NPSTC believes that the use of Regional Planning Committees (RPCs) as the Commission has defined in prior actions for the 700 and 800 MHz public safety bands is the appropriate method to address these issues. Regional Planning has proven to be highly effective in promoting spectrum utilization by increasing frequency reuse through local coordination by individuals familiar with the technologies and the topography of the area. Additionally, the potential mobility of some of the applications identified above could require significant and ongoing real-time coordination of specific pieces of the band, such as for mobile video surveillance. This is an appropriate activity to be conducted under the auspices of an RPC.

NPTSC does not propose the establishment of a new RPC mechanism, rather we encourage to Commission to expand the scope of the existing 700 MHz RPCs established pursuant to WT Docket 96-86. These 700 MHz RPCs are representative of all of the eligible licensees proposed for this band. Furthermore, we believe that the Commission should again

task its National Coordination Committee with developing implementation guidelines for this band. We note that the NCC's Implementation Subcommittee report has been submitted, and that remaining activity for the NCC currently lies primarily within the areas of interoperability and technology selection, both of which are functions of other NCC subcommittees.

Frequency Coordination

NPSTC recommends that frequency coordination within this band follow the same procedures established for the 700 MHz band, with any of the four FCC-certified public safety frequency coordinators (AASHTO, APCO, FCCA and IAFC/IMSA) eligible to process license applications once they have been reviewed and approved by the appropriate Regional Planning Committee. We note that all four public safety coordinators are members of NPSTC.

Furthermore, NPSTC has initiated an inquiry to the National Institute of Justice with regard to expanding its 700 MHz pre-coordination database to include the 4.9 GHZ band in support of the RPCs.

With the potential plethora of applications within this band, NPSTC encourages the FCC to formally request the TIA to expand its TSB-88 document to include emerging technologies that may be implemented in the 4.9 GHz band. Such a request could be initiated through the NCC's Steering Committee.

Licensing

The 4.9 GHz band presents different licensing requirements than for public safety bands below 900 MHz. The low power, very limited range of most transmitters anticipated for use

within this band will result in potentially hundreds of fixed sites within a jurisdiction to support such applications as hot spots for mobile office technologies (linking mobile or portable platforms to fixed infrastructure). Therefore, NPSTC supports the concept of agency licensing such that a single license is issued to an eligible entity for the use of a particular bandwidth(s) throughout its geographical area of operation, to include authorized frequencies, bandwidth and power, but without regard to specific location(s) of fixed transmitters or to the frequency(ies) used at specific sites. We recommend that the Commission issue such a license so that emission characteristics and frequency allocations required for Regional Planning and frequency coordination are captured on each license. Beyond that, interference coordination with adjacent jurisdictions (boundary area coordination), as well as specific frequency allocations among agencies with overlapping jurisdictional geography (a county and city, for example), would fall within the purview of the appropriate RPC.

CONCLUSIONS

NPSTC again commends the Commission for dedicating 50 MHz of spectrum to public safety for broadband wireless applications in the 4.9 GHz band. We urge the Commission to expedite its development and adoption of the technical service rules and regulations in this band to make it available for critical public safety use as quickly as possible.

Respectfully submitted,

Marilyn Ward, Chairperson
National Public Safety Telecommunications Council
NPSTC Support Office
NLECTC – Rocky Mountain Region
2050 Iliff Ave
Denver, CO 80208
(800) 416-8086